Collaboration: A Key to Innovation

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Abstract - **This paper discusses needs and changing face of collaboration for benefit of business. It points out that smart businesses already are looking for ways to connect communities not only of employees but also of customers, partners and others "outside the firewall" so they can tap into both internal and external knowledge and use that knowledge to accelerate innovation. It also includes the approach currently adopted for collaborative innovation in industries.**

Keywords: Innovation, Collaboration, Culture of Engagement

I. INTRODUCTION

INNOVATION IS the core business competency of the 21st century. In order to not only compete and grow but to survive in a global economy, businesses must innovate. Innovation is possibly best defined as the exploration and exploitation of new ideas in pursuit of a competitive advantage. Innovation is not necessarily about big-bang, major breakthroughs. More often, it is incremental and built on the day-to-day expertise of employees and their thorough knowledge of customers and competitors.

No organisation operates in vacuum; all require any kind of collaboration that depends on timeframe, degree of commitment and level of interdependence. Collaboration with people who think in same way is never going to produce anything radical. Collaborating with competitors seems to be foolish but by working with unusual suspects, companies can be innovative and gain a competitive advantage.

Collaboration, to achieve something big, has historical significance as well in period of Ramayana. Lord Ram collaborated with Vanars to conquer Ravan. Collaborations yield results by fostering innovation. In fact, true innovation is virtually impossible without collaboration.

Innovation is indispensable to success. In IBM's CEO study, more than three quarters of the 765 chief executive officers queried cited collaboration and partnering as very important to their innovation efforts [1].

There are many misunderstandings about what innovation, in a business context, truly is. Innovation should not be restricted to:

- Big ground-breaking ideas or technological leaps forward
- Creative jumps of the imagination which cannot be planned or prepared for
- The R&D department or the "creative types" in marketing!
- Creativity 'workshops'.

Innovation is often about small, incremental changes to products, services and processes. It needs to be integrated into the business at both strategic and operational levels. It is the core business skill and process for the 21st Century. Figure 1 depicts rank of India in Global innovation index.

Innovation can be broadly classified in four distinct levels [2]:

1) *Transformational Innovation*: It involves radical changes in company strategy, or line of business or mission and goals. This type of innovation disrupts the existing market or creates a new market.

2) *Category Innovation*: This is driven by anticipated customer needs and insights in order to develop new products.

3) *Marketplace Innovation*: This is driven by competitive market needs. This is generally defined by new features and benefits with an ability to impact multiple categories *e.g,* having additional variants for existing products for new category of customers, enhanced version of the same product etc.

4) *Operational Innovation*: Its purpose is to improve efficiency, effectiveness and profitability by improving operations of the organization. This is more about 'how' part of the business and looks at saving time, improving quality, increasing productivity,

improving work environment, upgrading technology. Operational innovation is also driven by the net benefit transferred to the customer or value added for the customer.

To achieve all these innovative outputs, companies must make data available to more people in the organization; change the corporate culture to one of collaboration and trust; and implement tools to harness collective knowledge, experience and communities. If companies are successful in these efforts, they can unleash a world of new innovators.

Primary requirement of collaboration is to outpace competition [3]. Many people are thinking differently today about how they work and how they use technology to support their work. Evolution of the computer desktop is an indicator of the ways in which collaboration and communication are changing.

II. COLLABORATION FOR INNOVATION

Innovation starts with creativity, which is about generating novel ideas. Innovation is the process of converting workable novel ideas into processes, products and systems of value to the organization. Innovation leads to: value addition for customers/ enhanced customer satisfaction/ cost benefit/ addition of new features.

Innovation happens when connecting previously unconnected bodies of knowledge. Continuing to collaborate with same people from same context, in the same way is not going to achieve the objectives. Thus innovation comes only when collaboration occurs across communities. As the Internet has grown, new communication and collaboration techniques have rapidly increased. Social networking, Web conferencing and instant messaging have rapidly grown to huge proportions, enabling widespread business collaboration. Expanded communications capabilities have costs in both time and money, but these factors only point to the need for more effective ways of collaborating.

Younger workers are familiar with social networking tools and have embraced the Internet's move from publishing to commerce to user engagement. Most human resources officers admit their companies could be more adaptable. Companies that can adapt share recognizable traits [4].

In HR focused collaboration, information is made available to a group, enabling work that is more open, faster and more cost-effective. In tomorrow's collaboration, the group will be able to operate as one, creating new relationships with new roles and interactions. Great ideas can come from practically anywhere as the company's structure and workforce roles are constantly emerging and recombining. Collaboration can set the stage for profitable growth and unified communications can lay the groundwork for collaborative connections. New tools can help users better express themselves, find like-minded communities and make the Web a platform for work. Open source and open standards can be keys to creating tools for collaboration across companies, partners, customers and suppliers. Ultimately, how collaborative capabilities function will virtually disappear because collaboration is about people, not tools.

New and existing technologies will work through a single infrastructure to make sharing knowledge pervasive. Tagging will enable the creation of repositories of popular information. Tools that enable people, teams and communities to work together can build innovation through collaboration and communication [4]. A partner with a track record of success can help individuals and companies build and maintain productive business relationships.

At Siemens, virtual cross-functional teams provide knowledge overlaps to help avoid such problems. Each module is developed by a specialist team and overseen by a virtual team comprising representatives from each of the other modules. This allows potential problems to be flagged and resolved as they arise during development itself.

Robert Bosch develops new products based on feedback received from customers.

Essilor of America Inc. adopted a Nominal Group Technique (NGT) as an Innovative approach.

III. DRIVERS OF COLLABORATIVE INNOVATION

Open innovations deliver significant value to organisations through identification and exploitation of complementary capability. Truly Collaborative relationship with external partners allows organisations to increase their rate of innovation, differentiate themselves in marketplace and achieve cost and efficiency savings. However employees often resist the introduction of open innovation, seeing it as a threat to their roles and traditional model of R&D. As a result, relationship with external partners become transactional and both organisations fail to reap the true value that can be delivered.

Following are few points which can enhance and maximize the win-win partnership for all stakeholders [5].

- Structure of Open Communication
- Promote environment of mentorship
- Empower human resources to create value
- Align objectives to organisational interest
- Create structure to develop collaborations.

IV. APPROACH TO DEVELOP COLLABORATIVE INNOVATION

In collaborative innovation, involvement of all stakeholders are important. The Innovation process consists of following major stages [6]:

- Idea generation
- Idea evaluation
- Feasibility analysis
- Idea implementation.

The starting stage is Idea generation. The pre-requisite for this is an encouraging environment, open culture, resources and time for bringing up improvement and innovation possibilities. Various steps in idea generation stage are:

(*a*) Identifying/ focusing on a target area for improvement: This may be linked to particular product issues or some critical business needs or inputs from customer/ design partner. Or, it may be just a proactive measure for improvement.

(*b*) Converting focus area into a challenge: After identifying target area, the problem/ input needs to be converted into a challenge. A challenge is a short, terse question that invites creative solutions.

(*c*) Challenging engineers to suggest creative solutions: Once the innovation focus and challenge are decided, the team members are to be communicated for generation of ideas with a time-frame. Also, the project team can proactively work on certain self-defined focus areas.

(*d*) Collaborative idea generation: The forum for idea generation and pooling of ideas should ideally be in a collaborative environment. It can be through project team discussions or brainstorming session.

Triggers for Idea generation:

(*i*) Need for Product variant/ enhanced version from Marketing/ customer.
(*ii*) Project Review meetings and Design Reviews.
(*iii*) Obsolescence.
(*iv*) Improvement suggestions from engineers - D&E/ Production Control/Testing/QC etc.
(*v*) Customer feedback/ inputs at inspection level/ Trial/ Acceptance/ Field usage
(*vi*) Inputs from outside sources.
(*vii*) Changes in external environment.
(*viii*) Learnings from imported products.

The second stage of Innovation process is Idea evaluation which results in screening out the unfeasible or less promising ideas and retaining only the candidate ideas (promising ideas) for further developing. The ideas can be summarized w.r.t relative merits, cost, benefits, risk factors, feasibility, resources, and suitability. Also, similar ideas can be combined into idea clusters.

The third stage of Innovation process is Feasibility analysis which results in establishing the usefulness of selected ideas. This aims to develop the idea to just sufficient level to help in decision making regarding the profitability of the idea. The steps are as follows:

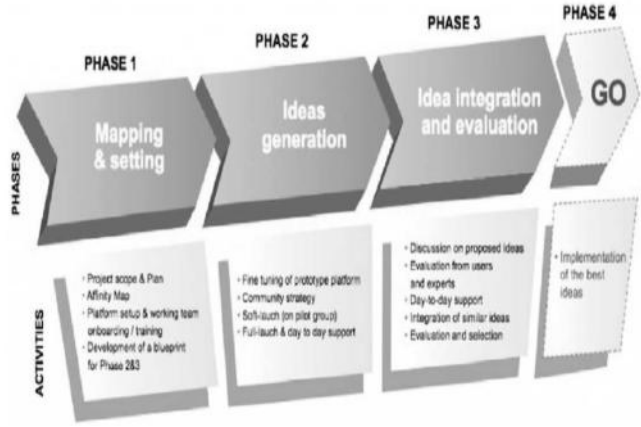
(*a*) Developing ideas: The purpose of developing ideas is to test them in business Environment and prepare the ideas for implementation. This is done by modelling, simulation, analysis and proof of concept or prototyping. This requires time and some resource.

(*b*) Review of Ideas: The outcome of developing of ideas is reviewed to take further decision regarding implementation. Customer/ end-user may be involved at this stage if required. Resource and time are to be allocated for implementation of selected ideas which will result in innovations.

(*c*) The fourth stage of Innovation process is Idea implementation based on Feasibility analysis. Documentation is also done at this stage.

Assessment:

- Number of ideas selected through evaluation
- Number of ideas converted to innovations
- Categorisation of Innovations
- Tangible/ intangible benefit.



V. CONCLUSION

The use of collaborative approach in innovation will definitely help us to

- Understand and make our new methods of work collaborative to speed up the decision making process across the organisation, functions and geographies.
- Map the collaboration and communication dynamics and informal networks within the organisations, understand logic, exploiting their strong points and monitoring their evolution.
- Make most of and best use of collective intelligence and Experience of the organisation within an informal but at the same time structured and repeatable process.
- Collaborate in extended groups using more efficient,

effective and focussed tools than those usually used and then email. Deliver knowledge and ensure it remains available to everyone.

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